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ABSTRACT

A method for providing a synthesis of the perspective that a text producer gives to a text in the moment of its production is presented in the form of a dialogue between reader and author. Perspective Text Analysis, the system presented, is a basic methodological part of a larger system of analyses. Linguistic data in the form of free text production is important so that the prejudices and attitudes, that both the researcher and the text producer may have, do not enter into the researcher's analysis. This guide describes the fundamentals of the method, and the principles of test analysis are given through prototypical examples. The applied model is based on the assumption that its components are reflecting "perspectivation," in which a source and one or more operators can be distinguished and differentiated from one another in the building up of a perspective. When the perspective is formed, the text producer takes a position toward something he or she wants to express. (Contains 41 references.) (SLD)

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The Essence of Text
A Dialogue on Perspective Text Analysis

Inger Bierschenk

1999 No. 70

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The Essence of Text
A Dialogue on Perspective Text Analysis

Inger Bierschenk

1999 **No. 70**

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Preface

The present publication is written mainly as a tutorial for those researchers who try to get out something essential from peoples' way of reasoning and behaving and who suppose that this is expressed in their spoken and written language. For years, psychologists, physicians, lawyers, marketing investigators, and others have experienced that the various kinds of questionnaires in use cannot measure anything else than what the investigator expects. Depending on the way in which the items are formulated, the order with which they are presented, the frame of reference against which a survey is carried out, etc, this characterise the answers. Aware of this fact, the investigator may "fix" an opinion poll, a fitness test or medical research data including all the uncertainty that this may bring about for both single individuals and society as a whole. Fundamental to the method I present here is that it gives a synthesis of the perspective that a text producer gives to a text in the moment of its production. A perspective cannot be developed within single clauses and sentences, as for example answers to questions, but in the co-operation between them. Therefore, linguistic data in the form of free text production is important, so that prejudices and attitudes, which both the researcher and the text producer may have, do not enter into the analysis.

The baselines of the method Perspective Text Analysis (PTA) were drawn during the beginning of the 1980's, while my husband Bernhard and I spent a couple of academic years at research departments abroad. The very first ideas about the possibility of analysing text against the background of the intention within a text producer were born by the middle of the 70's, though. However, since then the theoretical assumptions have deepened along with innumerable empirical experiments, and so the methodological prerequisites have changed. The development started in the broad social science perspective and moved on toward a linguistic and psychological one concerning methodological matters. Since a year or two we have been able to anchor the method at the biological-physical level.

Perspective Text Analysis is the basic methodological part in a larger system of analyses. By the end of the 1980's Helge Helmersson designed and programmed a system of programs for PC, called PERTEX. Except these two components this system also comprises a structural representation of the analyses in topological form. In the present guide I describe the fundamentals of the method and therefore I present the principles of text analysis by prototypical examples. By my way of describing I have added explanations, which means that I hope the reader will understand the presentation as the outline of a language theory. Because of the tutorial character of this publication I do not give references in the text. The names that I mention are supposed to be known. The reader, interested in the theoretical and practical development of the method, is referred to the directed list of references at the end.

Finally, it is very common that a new theory is conceived of as controversial. For this reason I have chosen to present it by way of dialogue. The *Author* and the *Reader* invite you to a scientific talk, which has its ground in questions posed to me in university seminars and courses for many years.

Lund and Copenhagen, 1999
Inger Bierschenk

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1. On the Search for Structure ...

Author:
I would like to begin my discussion with a question to the Reader, namely,
What do you think a text is?
Reader:
Well, it's something you create with the help of linguistic and technical rules. When I think of a text, I see it automatically as something that has length, width and rows, you know. To me, a text is in the first place something written, something I can look at.
Author:
Good. But put yourself in the situation where you are supposed to say something about that text on scientific grounds. What kind of means do you have for that?
Reader:
It depends on the problem, I suppose, but I have a feeling that my education and affiliation determine the way I will approach the problem.
Author:
Of course, but it will also be a matter of how you interpret and apply scientific concepts paradigmatically. For sure, scientists can have the same basic outlook but belong to very different disciplines.
Reader:
Do you mean that my conception of a text has to do with my basic outlook, which I may have in common with many others, and which governs the way I approach the text methodologically, and so on? In that case, linguists, social scientists, physicians, etc should get similar results if they have a similar basic outlook. Or did I get it wrong?
Author:
Yes and no. And here comes your research problem in. I will give you some examples. Take for example the concept of context, that is, the frame of interpretation. To the linguist, the text as scientific object is relatively new, but we can regard a sentence as a text, according to the definition you gave to begin with, and then it is just a matter of length. The linguist's investigation often deals with the question of the grammatical correctness of a linguistic expression in relation to what shall be expressed. Words are interpreted in the frame of surrounding words and when all have co-operated the solution is ready. The social scientist, for example an economist or sociologist, will analyse single words and phrases as well, but the amounts of text are usually greater and the frame of interpretation much wider. So when the social scientist is ready his result is supposed to say something about some extra-linguistic phenomenon. Finally, the physician. In clinical settings, it is now becoming practice to use texts complementary to the interpretation of deficiencies. Certain aspects of a text become analysed according to some medical theory and the conclusions are drawn to the disease context. It is usually not very wide but ends within an individual or sample. With these examples I wanted to say that the results are mirroring the very differences that the various studies have. But the prerequisites to create them build on the same basic outlook. That you may be uncertain here depends, I think, on the fact that you don't need to be aware of what your basic outlook is actually.
Reader:
Then you have to explain to me how a so-called basic outlook can be seen in my work.
Author:
Okay, common for the three examples is a conviction, a dogma, something that will not be questioned, namely the statement "Text is flat". You have yourself, without knowing it, confessed to this dogma. You regard the text as a plane, an immobile laid-

out pattern, whose texture you have to perceive and physically use according to conventional rules so that you don't end up in unknown lands. With such a view you can measure the textual elements, you can count them, compare them, in short, you can treat them as anything else you place in line.

Reader:

Yes, but the things you call elements have contents, so the unknown lands will be laid bare by the researcher's interpretations, won't they..., if you disregard the linguists.

Author:

I won't disregard them, because you and they are doing the same thing in principle, namely you interpret the text due to your own conception of what it stands for. Whether you do it on common sense grounds or you present a scientific model for the interpretation process, the whole procedure is still very subjective. Anyone can get almost anything "between the rows" into a text, and for sure the result doesn't become more scientific just because you write an extensive rule system or coding scheme.

Reader:

Aha, I see what you're after. Repetitiveness. But this is a matter of experimentation and reliability testing and all that. If the initial work has been well done, I'm sure others will use the analysis system.

Author:

Not quite, there will always be barriers when it comes to use interpretations made by others. Another thing is that you don't stick to your interpretation in exactly the same way if you were to repeat the analysis. Nobody can't be that rigid.

Reader:

No, as a human, I'm not perfect.

Author:

Exactly, and this insight is the very problem in science. And here I like to make a connection between the traditional linguistic paradigm and the scientific outlook, because it is this link that operates, so to speak, in all our examples so far. As you may have guessed, I'm thinking of the subjective and objective issue.

Reader:

Yeah, okay, I accept such a link if you can explain to me how I can get a completely objective text analysis, ha! Since I cannot be a machine.

Author:

I'll try. Traditionally, a text is treated as disconnected to its source. In this way, the text becomes something material, an objective statement, a predicate, whose meaning you decipher to build up knowledge about a particular world. It's you who are the subject in this process and you're not linked to the object in the predicate, for this would be unscientific, you have been taught. Right? Instead it is the objective that is supposed to govern the knowledge creating process. What I've said now is, in fact, the basic idea of a paradigm, which I may express like this. Can you interpret the symbols?

$S \leftrightarrow V \leftarrow O$

Reader:

Yes, at least partly. I suppose that (V) stands for verb, because otherwise there will be no predicate. I can also see the unidirectional arrow, showing that the object is governing the statement, even though I do not understand it quite. And how do you explain the bidirectional arrow between the subject and the predicate?

Author:
Well, as you see, the model has three components. The interesting thing is here that the object in all its variants seems to have one common frame of interpretation, namely that it is something given and as such it has an influence upon us and thus upon our actions. So, the meaning of the unidirectional arrow is simply that we are being governed by the object. With the bidirectional arrow it is different. It symbolises that our actions cannot be understood independent of ourselves. But (S) doesn't stand for ourselves only, for the researcher as subject, it also stands for the subject of research. This means that you cannot understand the text as an action independent of who has produced it. According to this basic outlook you associate or attribute your analysis result to a subject, that is, you attach it to your informants afterwards. Because you are not allowed to pay attention to the subjective element during the run. Are you following?
Reader:
In the main, even though I haven't seen it dealt with in this way before. But carrying in mind what you said earlier about my text analysis, I wonder… It seems as if you mean that my basic outlook leads me to introduce something subjective into the analysis, despite that I've tried hard to make the process objective.
Author:
That's my point, you learn quickly. I think you're ready for adopting a new line of thought, which - believe it or not - will solve the objectivity problem for you. But you have to wear other glasses, because this paradigm postulates that the text is round. Yes, you heard it. "Text is round". This line of thought has created a method that makes us discover the depth of a textual pattern, the structure, which is continuously moving. The method may get you realise that it is indeed not up-to-date to conceive of text as flat. The method is called Perspective Text Analysis.
Reader:
What do you mean by perspective here? And who's perspective?
Author:
Something that creates space. The one, who is producing the text, creates space, and not the one who is approaching it scientifically.
Reader:
Does it mean that your method can get at something under the surface, for example with the use of some deep structure analysis or so?
Author:
No, I don't want to use the word deep structure, because it reminds one of Noam Chomsky. What he did was to apply a logical formalism to the analysis of human language, which means that he gave an artificial solution to a natural problem. Quite naturally, he got many followers within Artificial Intelligence, mathematical linguistics, computational linguistics and similar new branches. The problem is that Chomsky's model is capable of handling a small amount of simple, grammatically correct sentences, as if human language were not at all of organic nature. For sure, this is not too strange because the old paradigm is really hard to kill. But I don't see any sense in comparing two methods with so different basic outlooks. Instead, I'm taking up your essential question, whether my method is capable of getting under the surface. It depends on what you mean by "under". My opinion is not that there is a surface-deep structure (1:1) relationship between textual elements and deep dimension. Those things are for semantics. Instead of "under" I use "behind" or "beyond". It refers to the fact that there is an intention (not meaning), which steers and controls the way the text is evolving and which only partly coincides with what we interpret lexically.

Reader:
Uh, this sounds like some mumbo-jumbo. Are you saying that the text isn't what it looks like?
Author:
Both, in a way. When you read it with your ordinary glasses it is the texture that you read off. To perceive meaning of any kind you use earlier made experiences, known, general and personal knowledge, etc of the world the text is mediating. The intention behind the overt pattern is nothing you read analytically. It has an effect on you immediately, provided that you have a pick-up mechanism or scanner to receive it. It is the invisible that constitutes the structure, but it operates through the texture and without the co-operation of the two no organic text would evolve.
Reader:
I see, but how do you give expression to an invisible perspective in a paradigm?
Author:
The first thing I do is to change the symbol (S) for an (A). You remember perhaps that (S) stood for the subject, which in its turn was unbound to the object. As such it is not responsible for the statement. That's why you could treat the text as a de-personalised subject. Now, if one insists that there is a personal intention beyond the text, well then there must be a responsibility too. I call this component Agent. Can you interpret the new paradigm?

$A \rightarrow a \rightarrow O$

Reader:
As far as I understand it, the Agent steers the objective, I can see that the arrows denote a directiveness, a dependency, which did not exist in the old paradigm. But I'm not sure that I see what you mean by the small (a).
Author:
A good observation. The (a) is the symbol for "action", that is the activity it means to produce the text in speech or writing. The difference between (V), standing for verb or verbalising, and (a) is similar to that which holds between producing linguistic characters and the intentional behaviour of producing a text. Moreover, I would like to stress that the (O) here symbolises Objective, which is not the same as Object.
Reader:
Yes, but what is the difference?
Author:
Object is thing-oriented while Objective is perspective-oriented. It has to do with conceptions and aims and refers to some dimensionality that Object cannot do. Hence it overcomes the all too concrete way of viewing reality.
Reader:
I can buy that, but it isn't clear to me whether you mean that the paradigm symbolises intention and perspective at the same time. Do I have to wear bifocal glasses?
Author:
Excellent! I pass over to the model that is based on this paradigm. It is the model that has been transformed into an analysis system. I take away the arrows, because you know them by now. Next, I have to use a parenthetical expression to denote the relation between the text and the production of it, like this:

(A a (A a O))

Do you agree that (A) stands for the responsible Agent in both cases? Okay, then the model expresses the circumstance that the agent of the text gives depth to itself and to the text by writing it.

Reader:

I must admit that I can't see how, but I have become curious of the method anyway. One thing which you haven't made clear yet, I think, is the objectivity question. If I have understood the outer parenthesis right, the originator of the text is part of the model. It sounds like an echo from the 70's, when the researcher, as far as I have heard, was supposed to be part of his research process or something like that.

Author:

No, rather the 18th century thinking, it refers to Immanuel Kant in the sense that the knowable always comprises the knower. With a more modern frame of reference one could say that the process, when a text is coming into being, is a production process, where the producer (the outer parenthesis) is responsible for the quality of the product (the inner parenthesis), which really isn't that strange. But you have to differentiate between the phenomenon and the knowledge creating process. In case you peel the intention off the text and impose your own reference system, you think you keep yourself objective. What you do is, you introduce the subjective component as part of the process. With the new model you don't have this problem. The subjective component is necessary if you want to state something on objective grounds about the text, that is the phenomenon, while you as process component at the same time are being neutralised.

Reader:

It sounds plausible. I feel curious enough to continue listening to you. I mean, it isn't reasonable that I reject something before I get to know it in some more detail.

Author:

Nice, then let's do it like this. I'm preparing a manuscript that will be a guide to the method. If I give it to you as a lecture and take up the points I had planned to include, would you then be kind and pose questions at those passages where you think I need to fill things out.

Reader:

Sure I will. I have a suggestion on the spot. Begin by a general presentation of Perspective Text Analysis, at least so that the reader gets a little flesh on the linguistic bones, although without being too long-winded. Don't take up subject matters I don't know anything of. But please provide a handle, some general theoretical clues won't hurt to begin with before you go into details of the analysis, which I suppose you intend to do…

Author:

Yes I do, I might dangle the whole thing up on an introductory part about … what I mean a text is.

2. A New Text Concept

When the aim of a language and text analysis is to get at structure, the applied model should be based on the assumption that its components are reflecting what may be termed *perspectivation*. It means that one can differentiate a source and one or more operators, which are distinguished and differentiated from one another in the building up of a perspective. When a perspective is formed, this means that the text producer takes a certain position toward something that he wants to express, a so called point of

view. Therefore, we can say that the text is a transformation, reflecting a mentally ordered field, which has a particular range and a certain effect on the way the movement in the text, the textual *flow*, is steered and controlled. The agent holds the key function, in concrete as well as transformed sense.

2.1 The Agent as Function

To show the way, in which a perspective emerges in a text, I first have to make clear the meaning of *agent*. Agent stands for an individual, autonomous way of governing a process. Depending on what the process concerns or where in the flow the government becomes evident, the source emerges in the shape that is the most feasible for the moment. In this way a sub-component may stand for a unity, which has as consequence that the unity is not known in all its parts during processing, not until the text production has come to an end. An important consequence of this model appears in the agent-function, which is bound to the first position in a so-called functional schema. The schema is the very mechanism that puts the AaO model into operation on text. Except for certain formal words (conjunctions, prepositions) any piece of text can hold the agent function. By this it is possible to control the co-operation between the visible, known, and the invisible, unknown, that is between texture and structure.
Reader:
Sorry for disturbing you at the very start, but I am not sure I understand what a schema is the way you use it.
Author:
It does not surprise me at all, because it is used by representatives of various scientific fields with the unambigous sense of "frame". You may see it applied within computer science and linguistics, for example, in the notion sentence schema, which means something you construct to make visible syntactic patterns. Their schema concept is a data-holding device and builds on semantic decisions of which words take which positions.
Reader:
Well, I was associating to something like that. But you mean something else then?
Author:
Yes, our conception is that a schema is axiomatic, something a priori, which cannot be constructed. As such it is structurally bound. What I call positions are only two, either before the verb, the A-place, or after the verb, the O-place. The two positions forms the widest possible openings for the synthesising process I mentioned earlier to come about. In this way the schema is put into function by the model but is not the model.
Reader:
I am content with your explanation. But before we continue, I also wonder about the agent concept, which I have heard about from the natural scientists. Is it the same concept?
Author:
To a natural scientist the agent concept is known as a cause or potential energy, to be found outside the object of analysis itself. If you use the concept in that sense a text's agent should be somebody or something that causes the text to be written but without being part of the text. In our context it is. The reason is the view of text building as biologically rooted behaviour and that it therefore is impossible to disregard the agent because it is the very root. Since this behavioural root is internalised into the text, it was conceived necessary to incorporate it into the model, too. However, this doesn't mean that we throw the scientific objectivity away. On the contrary! Thus when we

talk about the agent as part of the model it must not be confused with the responsible researcher, who still behaves objectively vis-à-vis the phenomenon he is studying.
Reader:
I understand the agent as idea in your model, but your outline about the agent as function became a little short. How come that you say a function is biological, isn't it mathematical?
Author:
This is a difficult question, which physicists argue about still today. Function is here seen as empirical, something that operates on something final. The elements are showing up, maybe only two or three times. If you will test something quantitatively, it is an analytical function you should use, for which you can give a formula. But this concerns only the structural stability of a process, as René Thom expresses it. Then we have to do with a structurally defined function, which operates on local relations.
Reader:
The empirical function! That was new to me. Could you explain in more detail how the agent is used as controller of the textual flow, which you mentioned earlier? Can I use my grammatical knowledge, for example?
Author:
Well actually I have planned to go into those details when I present the text analysis, but I will take up the functional analysis in another way, because it will probably make it easier for you to follow me later on.

2.2 Peepholes into Textual Depth

A main difference between a traditional sentence or clause analysis and the analysis by means of the functional schema I have put forward by the expression "the functional clause". When the functional clause operates on text, it means that you always find an agent and an objective present in the structure but not necessarily materialised and visual at their functionally determined places on the texture level. But through the presence of a verb there is a key to a functional clause. In this way a theoretically interesting cutting edge is defined between the known, material, and the unknown, immaterial. By the functionally bound positions the algorithm detects filled and empty positions. The empty ones afford peepholes into the textual depth or space, since agent and objective are momentarily occupying different spherical positions. The task of the algorithmic analysis is to discover the spherical oscillations, which arise along with the movements of the flow. The piece of text that is occasionally missing is put into its functional place and so the hole is filled. But it has been functioning as a channel through which information, the immaterial, can flow. Thus it is the holes that are the structurally interesting thing in the text, because without them the text would be very flat, for example as flat as a questionnaire.

The text producer is steering the text forward, which means that the information flows irreversibly. In the model there is no use of the grammatical concepts of word order. So what would be subject or agent from a traditional linguistics point of view may functionally be the object of the perspective in the irreversible flow. I will take an example. Use your old grammatical knowledge and do an analysis of this sentence:
Why should I help the community?

Reader:
Ugh! 'I' is subject, 'should help' are predicate verbs, and 'the community' is object, ...something. 'Why' is a kind of question word. How about that?
Author:
All right, for my purposes. I'm going to show you now how the sentence will be analysed functionally, which will bring about the perspective. First I leave holes in the text and write markers (Ø) for placeholders. Then look at what happens:

Why	O	should	I	Ø	help	the community
	X	verb	O	X	verb	O

The peephole helps us see that it is the unknown agent (X) that steers the flow and that 'I' in the text is objectified. Here the controller, the steering function, has been operating. The opening and closing of a hole makes it possible that variable agents, called textual agents, can function as regulators for the X-agent. The bound functional agent position in this way becomes a window on the super-ordinate idea in the text production. This idea, which is the synthesis of a PTA analysis doesn't build on classification and categorisation but on the development of a superstring, i.e. the AaO-string.
Reader:
Oh, I see, you made it much clearer now. The more peepholes, the longer becomes the superstring and the rounder becomes the text! You're nodding. Fine, I dare pose a question, which I conceive as central. If I walk out on a field and look toward the horizon, my perspective has a certain range, but since earth is round, this range will change perpetually. To keep my perspective I have to mark where I stand at a given point in time. If I would like to comprehend Perspective Text Analysis as theoretical measurement, my question is, How do you draw the borderlines?
Author:
A very initiated question. I will try to elucidate it by relating to the ecological thinking in psychology, which the concept of perspective to a high degree is based on. I hope you will get the missing links.

3. Links to the Perspective

3.1 Natural Borders of the Perspective

To form a perspective, or to perspectivate, implies on one hand perceiving oneself in relation to ones environment, and to relate this circumstance in speech or writing on the other. In this sense language is a means for both perception and action. In writing the self-referencing mechanism is transcribed, which gives us access to a perspective without having necessarily taken part in the observation in person.

A perspective in a text is graphically demarcated by full stops. Within this demarcation, a process develops which comprises variable measuring points or viewpoints, which the observer focuses on with variable intensity. Physiologically the full stop is marked in that the air current is broken and a pause in the speech or a lowering of the pitch is observed. It is therefore possible to observe the natural full stop by transcription of speech, while by editing written text the same does not hold. In a naturally produced text the perspectivation process is not so distinctly referred to; it

oscillates depending on the "angles" of the observer before it reaches full stop. In many texts characterised as spontaneous speech, often a comma is repeatedly put before the marking of a full stop, sometimes in places where in the rules of writing a full stop is recommended.

Reader:

I must intervene with a question here. Many research materials look just like you described it. How do I manage to get a correct raw material to process? Which are the rules for correcting the material?

Author:

It's a misunderstanding to think that the text must be corrected to analyse it with this system. The rules of writing often destroy the natural modes of expressing things. It is the original text we want. Moreover, the method was developed on interview data, and it has been proved that pauses of the kind that would result in full stops may be solved technically by defining the "end of sentence" in more than one way. In the following you will hear about the setting of the necessary borderlines for the perspective.

3.1.1 Graphical sentence

A graphical sentence consists of a sequence of graphemes, sometimes interrupted by spaces and demarcated (surrounded) by full stop or another grapheme of similar value. This is a formal definition, which means that the words that the graphemes are forming and the potential meanings we attribute to them are of no importance for the definition. In the following section I will try to describe what this implies for the analysis.

Normally we perceive by reading and writing that a sentence or text has come to an end by a full stop or equivalent marker. Further, if no text is succeeding the full stop we have reached the end of text. Thus the last full stop is also marking the definite borderline for the analysis. For the computational analysis we also need to mark the beginning of text. For sure, the start of a graphical sentence is marked by every end of sentence as soon as we find ourselves in-between, but the beginning of the text, the starting point, which we normally use only informally, must be given a formal expression here. Consequently, the beginning of text is also marked with full stop. Starting point and end point is the formal definition of text demarcation. With this formal definition, text and graphical sentence is the same.

In the continuing discussion, I will visualise the principles of the analysis by giving examples of typical patterns and the way they are put in operation on text. I use some simple symbols for the patterns, which I explain as I introduce them. The symbol (—) denotes any sequence of graphemes. The symbol [ ] marks some kind if insertion into the text during processing. The (sm) symbol (sentence marker) marks the borders of the graphical sentence. Then we can represent graphical sentence as in my very first example.

sm —— sm (1)

This pattern can generate just any graphical sentence. Nothing is denoted between the markers except that there are graphemes. Let us take the following example of the first sentence of a text. The (tsm) symbolises the technical, inserted sentence marker. I write the text in column form so that you are able to follow how it is becoming symbolised successively.

Symbol	*Text*
tsm	[.]
	Work
	is
	over
	,
	I
	am
	tired
	and
	will
	go
	home
sm	.

The graphemes functioning as sentence markers are full stop, question mark, and exclamation mark (. ? !).

3.1.2 Graphical clause

A graphical clause is part of a graphical sentence, demarcated by sentence marker and clause marker (first or last clause of a sentence) or two clause markers. A clause marker (cm) sets the clause border but not the sentence border. Example (1) contains for example the pattern given in example (2). This pattern can generate a multitude of texts. For the sake of elucidation I take the same example and add missing symbols:

tsm —— cm —— cm —— sm. (2)

Symbol	*Text*
tsm	[.]
	Work
	is
	over
cm	,
	I
	am
	tired
cm	and
	will
	go
	home
sm	.

The graphemes with the function of clause markers are comma, semicolon, colon, and dash (, ; : -) and also conjunctions (and, ...) subjunctions (since, ...) certain pronouns (which, ...) and adverbs (so, ...) as listed in a small system dictionary.

In naturally produced text it may happen that the borderline between two clauses consists of more than two markers in a sequence. This sequence defines the demarcation as an end. By that, the algorithm redefines "the second clause marker of three in a sequence" as sentence marker. In this way we get an implicit marker of sentence border. The symbol (⇒) denotes that a certain prerequisite in the first segment points to a certain change in the second.

sm — cm cm cm — sm ⇒ sm — cm tsm cm — sm (3)

Symbol	*Text*		*Change*
sm	.		.
	It		It
	is		is
	because		because
	we		we
	feel		feel
	happy		happy
cm	,		,
cm	and	tsm	[.]
cm	that		that
	they		they
	pay		pay
sm	.		.

Now let me turn to a very crucial technical detail. At every clause the analysis makes a restart. Remember that we just defined the end of text as similar to the end of sentence. It is the task of the clause marker to inform that the text continues. If therefore a clause has no clause marker as opening word such a technical clause marker (tcm) is put in. Any clause opener can function as starter. Here we use 'that', owing to its general opening function:

sm tcm —— sm (4)

Symbol	*Text*
sm	.
tcm	[that]
	Look
sm	!

Reader:
Just a comment. The technical solution to the sentence border problem you showed - I find it smart. People like me who have not dealt with language in any detail we don't have to bother about those kinds of decisions. Then I think I got an answer to the problem of the outer borders. But how about the inner ones?
Author:
Well, it is a matter of keeping track of where to find the A's and the O's. This function is held by the constant. I will tell you about this core function in the next section.

3.2 The Functional Clause

For the analysis of perspective, the natural, graphically marked border is not a sufficient condition. For the final definition of unit of analysis, a link to the structure is missing. It is inherent in the action component (a), the system constant, without which some process is not observable. As constant, (a) differentiates the agent or perspective component (A) from the objective component (O). The graphical clause can contribute to perspectivation only if it contains a variable for (a). But only *one* in a clause. If more than one is to be found within the frame of one graphical clause, then a technical clause border [that] is inserted before the last one of two a–variables until all are distinguished. Thus, as you can see, the system detects a partly hidden perspective and expands the graphical clause to make possible structural information. This fundamental clause is the basis and has been termed *the functional clause.*

3.2.1 The clause constant

In the examples (1- 4), an (—) symbolised just any textual bit. As I go on I will mark the functional clause by breaking this symbol with the symbol for the clause constant. In the pattern, textual information before (to the left of) it always symbolises agent-variables, and after (to the right of) it always objective-variables. The constant is linguistically depicted by a verb, but since its function is to mark the unit of analysis rather than action in a semantic sense, its symbol will be (k). The following example shows how he analysis via the functional clause makes the text elastic:

sm tcm — k k — cm ⇒ sm tcm — k tcm k — cm (5)

Symbol	*Text*	*Change*
sm	.	.
tcm	[that]	[that]
	He	He
k	can	can
		[that]
k	come	come
	home	home
cm	,	,

Through the forming of the second clause, we see by the functional clause marking that an objective is missing in the first clause and an agent in the second. It will soon be clear the way in which the analysis is handling the implicit variables.

Reader:

I wonder how you define what a verb is? I mean, there are intermediate forms, various tenses and modes, and so on.

Author:

If you want to recognise a verb for this analysis, I can give you these recommendations. There is no need to make a difference between auxiliary verbs and main verbs or between finite or infinite forms. Those variants, inclusive tense and mode forms, are regarded equal in value. This means that composites automatically trigger two functional clauses. The function of the verb as constant also implied that word class was super-ordinate to syntactic variation in the development; participles are primarily verbs and not adjectives. What we gain is elasticity in the analysis, which is a

prerequisite for the elevation of depth. In my manuscript I have made this comment: "The verb in the function of constant should be understood such that the variability it shows at the phenomenological level can only be ostensibly synchronic with the semantic-logical frames of reference of the A- and O-variables". Is this a way of writing that is understandable to the reader?

Reader:

No, not to me anyway. Why don't you stretch it a little bit?

Author:

Okay, the verb functions as a suspender so to speak. Something that allows variability. What is varying is the A- and the O-component, respectively. This is why all the variants of words with a verb stem is given an equal value. We do not worry about coding their meaning as to time or else. In the process of filling in the A- and O-slots, words are being picked up from other places and inserted beside the constant. It sometimes happens that the picked-up element does not fit together with the verb, if you interpret the combination at the semantic-logical level. By that I mean that the question "Who can do what" as some kind of truth-value test for that which has become a surface phenomenon technically is not relevant. Keep in mind that two levels are co-operating in the course and when you "freeze" one section you cannot expect that all will fall in the right place.

Reader:

You mean that the movement is determinate, as when I am standing in the field.

Author:

Not the movement only, it is there even when you are moving yourself. Imagine that you turn at another angle, narrow as it can be. Your perspective will then range over so much more, not to speak about what happens when suddenly you take a whole turn. The fact that you cannot be fully conscious of all the points of measurement is quite clear. That is why I will now pinpoint the capacity this analysis method has, to keep track of the information flow.

3.2.2 Agent control

Now I would like that you recall what I said earlier about the hidden agent (X), which can be detected by being bound to a specific functional place. The agent is the source of the perspectivation and is necessarily marked before the verb, which stands for the organic action. When we are talking, and especially writing, we sometimes chose to hide the source for stylistic or other reasons. In such cases the verb helps to denote the agent's place, even though it is empty. Likewise the agent makes possible the detection of perspective shifts by marking the various depths of the functional clause and thereby the spatiality of the text. The clause of example (4) would have the following mark of agent's place:

sm tcm Ø k sm (6)

Symbol	*Text*
sm	.
tcm	[that]
O	[X]
k	Look
sm	!

We differentiate between an unknown (X) agent and a text agent. It is called X-agent when its placeholder cannot be replaced by textually bound information. The (sm) symbol to the left denotes that the X-agent is not derivable. If, on the contrary, a (cm) or (tcm) symbol alone is preceding the hole, the information is picked up via the hole into the textual depth which the placeholder opens up. So, the agent analysis in example (5) given will be this one:

sm tcm — k tcm Ø k — cm (7)

Symbol	*Text*
sm	.
tcm	[that]
	He
k	can
tcm	[that]
Ø	[He]
k	come
	home
cm	,

The functional clause must comprise both an agent and an objective variable to be able to carry structure. To fill the placeholder for an objective, the algorithm now searches to the right of the border. A (sm) symbol blocks the search in example (6) and thus the variable Y is inserted, which is representing the unknown objective. Now, we mark example (6) completely, as in example (8):

sm tcm Ø k Ø sm (8)

Symbol	*Text*
sm	.
tcm	[that]
Ø	[X]
k	Look
Ø	[Y]
sm	!

As shown in example (7), the first clause has a missing objective. The cm-border must be crossed and the information that goes into this place is the A- plus O- variables of the next clause. The principle behind this procedure is that *O integrates A* in a self-referring mechanism. Thus, the first clause in example (7) gets the following analysis:

sm tcm — k Ø (9)

Symbol	*Text*
sm	.
tcm	[that]
	He
k	can
Ø	[He + home]

The agent 'He' in the second clause has in the first place been copied in from the first clause before it as being part of the objective was put back again. The principle is that the agent governs the process, that is, it controls the objective before it can be integrated.

Reader:

Now I have seen what you mean by the ostensibly synchronic. I can also imagine that it might be worse. Another thing that you have to clear up to me is self-reference. Is it a concept of universal validity in this analysis?

Author:

Yes, as you may remember I mentioned Kant's philosophical paradigm. It is not only some fruit of thought. The same basic idea can be found in the writings of James J. Gibson, who instead of the 'knower' uses the 'perceiver'. In our model this same paradigm has been applied on a transformed level. That this paradigm would hold for texts is something that Kant presumably could not imagine, and I suppose not Gibson either for his part. When I said that the text producer gives himself depth, this is what I mean.

Reader:

Oh, I see now that I did not see it the first time.

Author:

Good. Now you have followed the way some main principles govern the analysis of the base components and the way the ground is generated automatically. The stretching operation of the functional clause has, I hope, also given you an understanding of text as something "spacey" and not linear.

In the next section I will present a more differential analysis of agent and objective, which I call cases. It is inevitable that you will recognise some of the principled examples but certain parts of the analysis will surely gain from being elucidated from more than one angle.

3.3 Differentiation and Integration of the Perspective

In a naturally produced text, as we have discussed, it will happen that a fairly great amount of placeholders are marking that information is missing in the texture and where it must be inserted. Depending on what kind of "hole" it is the missing text lies more or less far away. The living text may therefore be likened with the generation of a wave or pendular movement. Thus there is good reason to speak of angles. In the differentiation of the perspective, shifts will occur, which can be measured as angular movements. They are nine, as many in the A- as in the O-component, and each one forms a circle, which co-operates with the other one in asymmetrical movements. If, for example, an X- or Y-variable is put in at an empty A- or O-place respectively to mark unknown variables at both sides of the verb, a zero state has occurred, which is representing non-sense. From this state the text opens up so that the agents' swing controls the swings in the objective. The tendency seems to be that a wide objective swing implies a narrow swing in the agent. If this is the case much information is integrated in the agent, which weighs it down. Thus it is a matter of a co-operating mechanism, which at certain positions has reached a state when new information is added, which causes heavy weighted information and, consequently, rotation of various degrees.

Reader:
For heavens' sake, do you mean that Perspective Text Analysis really is a matter of such an exact measuring procedure?
Author:
I really mean that. And I liked to mention it especially for you, since I thought you would be interested. But for the moment it is too early to show the measurement in function on a text. There is a developmental work still going on. You have to look out for upcoming articles from us. What is already said and written is that it is the double helix operating in text I just described, although in a novel way. The rotating movements bring about clock-like transformations that have been given a structural definition here, which is a natural science definition and not a technical. The linguists have not succeeded with that so far. Well, what I want you to agree on now is that the analysis of what is agent and what is objective and the way in which they are distinguished in their environment has to do with the text producer's (agent's) mode of placing them in relation to the zero-state, that is marking the beginning of the track.
Reader:
Speaking of placing agent and objective - there exists something that we call transitive and intransitive verbs. How do you treat that distinction?
Author:
It is not relevant here. The space that is measured by means of Perspective Text Analysis does not build on Euclidean distance, that is, trans-*ition*. According to what I just described the verb should be regarded as a suspension (or rotation) point. By that we are able to measure even unexpected change, so-called trans-*formation*. If the rotation is straight or twisted, there you have the distinction.

3.3.1 Objective cases

When the verb is functioning as a constant, differentiation takes place with the constant as point of departure and to the right, seen from the natural flow of text. Bearing in mind that perspectivation has its source in the agent, that is to the left of the constant, the text sequence after it can be termed viewpoints, which, if there are several within one and the same functional clause, are ordered in relation to each other.
Differentiation into viewpoints within the functional clause takes place with the help of so called pointers, whose function just is to vary the orientation. If we have words after the constant which are not sentence or clause marker and they are followed by a pointer, this implies that the words in question are objective variables and that the elements succeeding the pointer are differentiating the objective component. A variable most close to the verb is called Figure or direction point (values of measurement which together form the conception or idea of a text), the conceptually most developed viewpoint. An element following the pointer is most often a so-called Ground or standpoint, whose prototypical pointer is 'on'. The pointer is symbolised with (p). In the continuing presentation I denote the variables for different objectives with the symbol (β). Example (10) shows the Figure case (β1) and (11) the Ground case, (β2):

k ——— (10)
β1

Symbol	*Text*
k	count
β1	money

k —— p —— k p —— (11)
β1 β2 β2

Symbol	*Text*	*Text*
k	count	count
β1	money	
p	on	on
β2	Monday	Monday

These two cases constitute the important co-ordinates of the text. Just like (β1) also (β2) can follow directly after the constant and is separated by the pointer from (β1). Content and meaning in a semantic sense are no adequate concepts in their functional analysis.

Other pointers, such as 'with', address Means or aidpoint and 'for' Goal or setpoint (or why not aimpoint, which is less concrete), something beyond the horizon. These four differential objectives have got their names according to function in perspective respect. The Figure is most close in the perspective of the agent and Ground supports or forms a relief to it. Thereafter we have Means but it is more specific and not so frequent. Goal is most far away in the perspective. The two last mentioned are to a higher degree bound to type of text than the former. They get the symbols (β3) and (β4) respectively. Just like (β2) they may show up without (β1) but there exists a strict perspective order between them when they co-occur in the functional clause. Thus it is the type of the pointer that decides the analysis of succeeding words. Pointers of type 'on' are assigned the symbol (p2), type 'with' (p3) and type 'for' (p4). In using type, I recognise that the prepositions may have variable use in different languages. When there is a variation between languages such as English and Swedish, it is most often an inter-type variation, for example the English go 'to' the cinema, and the Swedes go 'på' ('on'). In the examples I take I adjust to this usage.

k —— p2 —— p3 —— p4 —— (12)
β1 β2 β3 β4

Symbol	*Text*
k	knock
β1	a
β1	hole
p2	on
β2	the
β2	wall
p3	with
β3	a
β3	hammer
p4	for
β4	fun

The three types of pointers belong to the word class of prepositions and are listed in a very small system dictionary like the markers are. In systemic respect, (p4) has priority

before the other two prototypes and (p3) priority before (p2). This principle governs the in-between value structure, so that a variable with high priority defines one with a lower value if this follows in order to the right. The following three examples show how the pointers are redefining their respective variable.

k — p3 — p2 — p4 — ⇒ k — p3 — p3 — p4 — (13)

Symbol	*Text*		*Change*
k	lays		
	the		
	table		
p3	with		
	porcelain		
p2	on	p3	on
	table-linen		table-linen
p4	for		
	the		
	guests		

k — p4 — p2 — p3 — ⇒ k — p4 — p4 — p4 — (14)

Symbol	*Text*		*Change*
k	wrote		
	tales		
p4	for		
	boys		
p2	at	p4	on
	nursery		nursery
	school		school
p3	with	p4	with
	female		female
	staff		staff
	only		only

k — p2 — p3 — p2 — ⇒ k — p2 — p3 — p3 — (15)

Symbol	*Text*		*Change*
k	ran		
	out		
p2	on		
	the		
	ground		
p3	with		
	his		
	hands		
p2	above	p3	above
	his		his
	head		head

Reader:
Can we stop here for a while? It is interesting that the names of the different perspective objects have both concrete and abstract sense. They fit very well into the ecological thinking and have at the same time metaphorical meaning. Take for example the words ground and standpoint, in fact you use this kind of expression when you refer to reasoning. So you see I have no difficulty to follow your denotations. They also seem to be quite general. But I would like to get some further explanation to that order of priority.
Author:
As you word it, the names of the sub-components are well thought of, since they appeal to our metaphorical (or why not say depth) perception. As to the order of priority, it has to do with the irreversibility, to speak in terms of flows. If you are standing at a certain point from where you can view and you want to get a conception of other points along a certain track and you rush away to the highest point, then this one will be the point from where you direct your viewing toward the other ones. It will become your reference point. The other points get a subordinate value in your then perspective. So the objectives are shifting depending on the order with which you point them out.
Reader:
Oh, that is really a system.
Author:
The fifth case is a type that signifies that the objective is a placeholder whose replacement text is to be found in the succeeding clause, if it is not a new sentence. The co-ordinating verb gets in its function as constant no eigenvalue but is replaced with a plus mark which symbolises an explicit and thus additive or linear integration of the agent with the objective (see ex 9). Symbol for agent variables is from now on the symbol (α). Example (16) presents this typical case:

$$k\ O\ cm\ \alpha\ k\ \beta 1 \Rightarrow k\ [\alpha + \beta 1]_{\beta 1_2}\ cm\ \alpha\ k\ \beta 1_{\beta 1_1} \qquad (16)$$

Symbol	*Text*		*Change*
k	swim		
O		$\beta 1_2$	[the sea + blue]
cm	,		
α	the		
α	sea		
k	was		
$\beta 1$	blue	$\beta 1_1$	blue

The example shows the change of the value in ($\beta 1$) from step 1 in the process, where it is explicit, to step 2, where it is an additively integrated part of a newly formed ($\beta 1_2$). I like to remind you that when I talk of the text as a natural phenomenon I describe it in flow terms, where for example "after" means to the right of. The algorithmic analysis works from the bottom up. The process is symbolised by index.
Reader:
I like to stop at the concept integration. Both in example (9) and in this one you mark integration by a plus. To me integration is something you do not see, so to speak. Here it becomes association it seems to me.

Author:
A very good comment. Normally something multiplicable or conceptual is meant, for example, two words are written as one compound. The two becomes a third thing, integration. In this connection you have to imagine that it is the process itself, which is generating an integration, that we witness. It has not been finally formed yet. I will point out to you the difference when we come to the agent cases.

If the placeholder is preceded by (p), the text gets a p2-, p3- or p4-value instead, irrespective of the value it had at the picking up place. The following example shows the way the β-variable instead of changing value through integration is redefined by the pointer and is changing type:

$$k\ p2\ O\ cm\ \alpha\ k\ \beta1 \Rightarrow k\ p2\ [\alpha +\ \beta1]_{\beta2}\ cm\ \alpha\ k\ \beta1 \qquad (17)$$

Symbol	*Text*		*Change*
k	swim		
p2	in		
O		β2	[the sea + blue]
cm	,		
α	the		
α	sea		
k	was		
β1	blue		

Whether the pointer is the only one in the clause or it is the last one of several in the text sequence, it marks a variable border. The following border marker is a clause or sentence marker or both. In-between them there are either an empty (placeholder) value or a clause or a phrase. A phrase is defined as a sequence surrounded by pointer and marker or two markers. This case holds at the first alternative:

$$—\ k\ p2\ O_{\beta2}\ cm\ sm \Rightarrow —\ k\ p2_{\beta2}\ cm\ sm \qquad (18)$$

Symbol	*Text*		*Change*
	he		
k	thought		
p2	of		
O		β2	[how]
cm	how		
sm	.		

No phrase exists that can be inserted into the place of the dummy. Instead the clause marker 'how' is refunctionalised and becomes a variable of the β2-type. There are homographs that can lexically be both preposition and conjunction, for example, the Swedish 'om' (Engl. 'about' and 'if' respectively). Functionally, it is primarily a clause marker, but will be refunctionalised into pointer when it starts a phrase, according to the example given above.

As the definition of phrase is worded it does not contain any verb and can therefore not be analysed as a clause. The information it contains is primarily "frozen", since it lies outside the functional clause schema, but is connected to the preceding variable:

—— k p3 Ø cm —— sm ⇒ —— k p3 [cm ——-] sm (19)
β3 β3

Symbol		*Text*		*Change*
		she		
k		went		
p3		through		
Ø	β3		β3	[, maybe]
cm		,		
		maybe		
sm		.		

The pointer is steering the analysis of the phrase. In those cases where several phrases are connected the priority order is put into work (see ex 13-15). Connection can also take place associatively without any differentiation. Thus we get a refunctionalisation once again:

k Ø cm —— sm ⇒ k [cm ——] sm (20)
β1 β1

Symbol		*Text*		*Change*
k		travels		
Ø	β1		β1	[so often]
cm		so		
		often		
sm		.		

Reader:
Please hold on, I can't understand the word refunctionalisation.
Author:
No? It means that the analysis must work in two steps. Return to example (18) and think it over once again, and you will see.
Reader:
Okay, I read it once more. Hmm, this must be a way of getting rid of a lot of ambiguities in the ways people communicate.
Author:
That's plausible, especially the way we connect phrases. The method allows alternative perspectivations, like enumeration and personal rhetoric style. However, what you did not notice was that natural language has words with more than one function, without being vague for that reason. You can look it up in just any dictionary.
Reader:
Maybe I have to refunctionalise my thinking about clause and phrase then. You separate them, but wasn't it once something called phrase structure in the "old" model? If I am not mistaken, a phrase was a constituent, which could also be a clause. I think of Noun Phrase and Verb Phrase.

Author:
You are quite right, but in our model, it is the verb concept that defines the clause. The phrase is verb-less.
Reader:
So, what the analysis does is that it detects that a verb is missing after a word with double function and not until then it becomes correct. I see!
Author:
The remaining two objective cases carry the least possible information, a connection that cannot be filled with value, and a variable whose textual place remains unknown. The end of sentence (text) blocks an opening toward some collection place. The solution is in the first case that the β1-variable will be extended toward the dummy whereas in the second case no change whatsoever takes place:

k β1 cm cm Ø sm ⇒ k β1 [cm cm Ø] sm (21)
β1 & β1

Symbol	*Text*	*Change*
k	writing	
β1	articles	
cm	-	
cm	or	
Ø	[Y]	& β1 [- or [Y]]
sm	?	

k Ø sm ⇒ = (22)

Symbol	*Text*	*Change*
k	talking	
Ø	[Y] =	[Y]
sm	.	

3.3.2 Agent cases

We have seen that the differentiation of the objective does not require that the agent be known or present in the functional clause. It can be derived afterwards. But the agent is necessary for the analysis of integration, since integration is a specification of the value of the variable (see ex 9). Without integration the value is unknown. The sentence start is the top border for collecting the missing text of the agent variable, which adds a value. Example (23) shows the typical analysis of imperative clauses (compare ex 6).

sm tcm Ø k sm (23)

Symbol	*Text*
sm	.
tcm	[that]
Ø	[X]
k	Come
sm	.

If the text means a command and nothing else, you need an extra linguistic frame of reference to insert the α- and β-variables respectively. The text analysis only gives you a zero state, a totally undifferentiated object and a totally non-integrated agent (see ex 8). Thus (Y) stands for the total locking and (X) for the total openness, together they generate no perspective at all but non-sense.

Reader:

Can you explain how you reason. Before, you talked about angles. A wide angle should give a lot of perspective, or ...

Author:

Not at all, it functions rather like a diffraction defect. But I like to take my example from another side. A total openness surely implies that you cannot discern any contours or other characteristics, for there is nothing that sets the upper limit. The X-agent as first variable is universal, totally open to interpretation. The Y-objective as last variable locks the text. Here a definite borderline has been set, and it is impossible to cross. But structurally there is not a symmetrical relation between the variables X and Y, it only looks like it. (I take the opportunity to parenthetically put in that 'is' is not treated as an equals sign but as a verb like many others, that is 'X is Y' is active.) And now I come to my metaphor: Imagine once more that the text comprises a flow. It streams from a source in downward direction. Somewhere along the way somebody puts in the plug. This causes a flood, which just goes on and on until it ends up with a catastrophe. The situation is chaotic and can only be settled by somebody locking the tap and drawing the plug. You see what I mean?

Reader:

Sure, that metaphor is efficient. So, what you can say is that a text in principle contains chaotic states, which are adjusted as the process proceeds.

Author:

Exactly, but in the same way as it does not suffice to build dams as long as the tap is open, the agent has to be captured. Language has certain formal means to do that and I have called it stepwise integration. Now I remind you of the discussion about the integration process.

The following three cases with unknown agent are steps on the way. The agent is missing but has left traces behind in the form of a clause marker before the empty place. Still we cannot talk about an integration, as the main variable is X, but instead various degrees of differentiation of X. As opposed to the objective cases where phrases, markers included, get a value as variable, the differentiations of X function only in connection with the X-variable. I have chosen to symbolise the differentiation with (d).

sm cm Ø k ⇒ sm cm Ø k (24)
d

Symbol	*Text*		*Change*
sm	.		
cm	And	d	
Ø	[X]		And [X]
k	does		

Another kind of trace which reveals an agent's structural presence is seen via a phrase which differentiates variable X after having marked a frozen bit of information. The symbol (d) has been put onto both markers, which at the same time is determining for the analysis of the contained phrase.

sm cm — cm Ø k ⇒ sm cm — cm Ø k (25)
d d

Symbol	*Text*		*Change*
sm	.		
cm	So	d	
	okay	d	
cm	but	d	
Ø	[X]		So okay but [X]
k	shall		

If we compare (25) with (24), we see that the differentiation marks that the X-agent is given a somewhat more distinct shape, although still relatively vague. A sharper differential marking is a phrase starting with pointer. The information here is heavier than that in a phrase beginning with (cm).

sm tcm p3 — Ø k ⇒ sm tcm p3 — Ø k (26)
d

Symbol	*Text*		*Change*
sm	.		
tcm	[that]	d	
p3	By	d	
	train	d	
Ø	[X]		[that] By train [X]
k	has		

The pointer is refunctionalised in the position before the constant and before the agent. But, as we shall see, it has a third function, namely as a specifier to the agent. Specification, however, requires integration, which means that the agent emerges with its full value. It does so under the condition that a clause or sentence is indicated with their respective marker. The example holds for both cases. (α) denotes the visible agent.

sm tcm α k (27)

Symbol	*Text*		*Change*
sm	.		
tcm	[that]		
	The	α	The
		α	red-haired
α	girl	α	girl
k	is		
k	cycling		

And now we turn to expressions of specifications of the agent. Specifications always take place to the right of the agent variable but to the left of the constant. 'The red-haired' is morphologically seen part of the integration 'the girl' while a specification would be worded ' the girl with the red hair'. The type pattern would look like this. The symbol of the specification is (s).

sm tcm α p3 — k ⇒ sm tcm α p3 — k (28)
s

Symbol	*Text*		*Change*
sm	.		
tcm	[that]		
α	The	α	The
α	girl	α	girl
p3	with	α	with
	the	α	the
	red	α	red
	hair	α	hair
k	is		
k	cycling		

Here we see the third function of the pointer. It does not differentiate on the agent side, so therefore the following bit of text does not get a β-value. Of course there is a difference between regarding the red hair as an instrumental viewpoint ('The girl was cycling with the red hair in the sunlight') and a specifying condition ('The girl with the red hair was cycling in the sunlight'). The analysis relies on the perspectivation of the text producer. By means of specifications the agent is being weighed down, which among other things usually means that the text becomes hard to read, at least in the sense that both concentration and previous knowledge in the reader.

Reader:

I have understood the difference between differentiation and integration. But why does it influence the prepositions?

Author:

Well, in the objective they are there to give variable refraction, like islands in the stream. The flow dissolves, dissipates. In the agent they have the opposite function, that is they make dense, condense. Let us return to integration. The text may be likened with a pulsation process. On the object side the process of orienting is expressed, whereas on the agent side the result of this process is expressed, which also may be called a Gestalt. That the prepositions have an orienting function is obvious to you, I suppose. But when once the orientation has taken place, they do not point outward any longer, they direct themselves inward. In this way one can explain the way integr-*ating*, movement, becomes integr-*ation*, state.

What I have described so far concerning the agent is the steps toward a visible demonstration of integration. Now, to get at structurally hidden integration, we have to take into the analysis such characteristics that are typical of the textual flow. In contrast to the objective the agent collects its complementary information from the top, that is from the spoken or written space. The general rule is that the preceding α-variable is collected from above and inserted at the proper place:

sm tcm α k — cm Ø k — ⇒ (29)
sm tcm α k — cm α k —
α_1 α_2

Symbol	*Text*		*Change*
sm	.		
tcm	[that]		
α	Work	α_1	
k	cultivates		
	our		
	mind		
cm	and		
O		α_2	[Work]
k	beautifies		
	our		
	body		

Typical of spoken text at least is the use of the in-built placeholder of language to keep track of the rewriting of integration. The pronoun 'it' holds this function. A couple of grammatical terms for it are formal subject or extraposition. But since grammatical analysis is based on single sentences and clauses free from contextual relations and also, in principle, are constructed, 'it' in the example 'It rains' usually is interpreted as pronoun of the rain (noun) which the verb rain implies, thus 'The rain rains'. In the perspective (functional) analysis, any expletive 'it', stands for a non-determined agent (X), if it is the first word of the text:

sm tcm It k Ø sm ⇒ sm tcm Ø k Ø sm (30)

Symbol	*Text*	*Change*
sm	[.]	
tcm	[that]	
It	It	[X]
k	rains	
O		[Y]
sm	.	

Normally, 'it' is preceded by at least one A - O integration, which is picked up and inserted in the form of a block (compare ex 16). The condition is that 'it' stands alone between the beginning of clause or sentence and the constant:

sm tcm α k β1 sm tcm It k β1 sm ⇒ (31)
sm tcm α k β1 sm tcm [α_1 + $\beta1_1$] k β1 sm
α_1 $\beta1_1$ α_2 $\beta1_2$

Symbol	*Text*		*Change*
sm	.		
tcm	[that]		
α	Strawberries	α_1	
k	are		
β1	sweet	$\beta1_1$	
sm	.		
tcm	[att]		
	It	α_2	[Strawberries + sweet]
k	kicks		
β1	me	$\beta1_2$	
sm	.		

Author:
As you can see there is a difference in rewriting something known or something unknown. In example (31) 'it' takes up that which has been already said. I can't help thinking of a painting I saw some years ago at the van Gogh Museum in Amsterdam. It has a motif which could make one think of an agent of higher order, but its name was "The named", in Dutch "De genaant", I think. What was so interesting with that painting? Well, because its name had been translated into the very short English "It". I like very much this kind of pragmatism. The unknown has been earthen, so to speak. To call things by name has always been demystifying, hasn't it?

Let us now demystify the agent in the passive clause, which is a special case. It will be automatically inserted at the agent's place before the verb, irrespective of the text that is there already. This X-agent can be said to be the most structural in kind, as it is never marked and not even derivable from out of the texture, but still always structurally present. It is termed (Xp), where (p) stands for passive. Its top border is both clause and sentence. The angle that (Xp) is forming constitutes 360°, which means that it integrates a co-ordinate system. The result is that it transposes the text so that the information that looks like agent on the surface in fact has objective status structurally. The passive verb form is crucial for the analysis and therefore the constant gets this index for passive. We have in the following example, "Mary is loved by John", a passive construction with a textual string between the technical clause marker and the verb, that is at the agent's place. Irrespective of which variable there is, it is not the agent, the reason why the dummy for Xp is inserted at a first step (32 a). Next step will be to take care of the expressed variable, which is a β1, and open up the place immediately after the verb, which is the proper place of this variable (32 b). β1 is thereafter transposed, the place is deleted and the Xp variable inserted (32 c).

sm tcm — k_p p3 β3 ⇒ sm tcm — Ø k_p p3 β3 (32 a)
⇒ sm tcm β1 Ø k_p Ø p3 β3 (32 b)
⇒ sm tcm Xp k_p β1 p3 β3 (32 c)

Symbol	*Text*	*Change* (a)	(b)	(c)
sm	.			
tcm	[that]			
	Mary		β1	
		Ø	Ø	[Xp]
k_p	is			
k_p	loved			
			Ø	β1
p3	by			
β3	John			

In perspective terms John is no longer the agent, as he was in the active construction, "John loves Mary". The function of the passive clause is to stretch the perspective and twist it so that the viewpoints turn around the constant. The construction with Xp-agent has as its consequence that the rules of analysis, holding for the objective, can be applied as usual. The schema is twisting and information, which in active clauses differentiates or specifies the agent, is in this construction unfrozen. The placement of (β) and (Xp) may vary for technical reasons but does not effect the analysis. Now look at my last example.

sm tcm p4 β4 Ø k_p (33)

Symbol	*Text*
sm	.
tcm	[that]
p4	For
β4	students
Ø	[Xp]
k_p	are
k_p	shown

Reader:
This John-Mary example seems to be widely used. I don't know much of foreign languages, so I wonder, are the prepositions translatable? You indicated a while ago that there might be differences in their usage in the German languages, for example.
Author:
An interesting question. The French 'par' points at the same perspective as the English; John is regarded as an instrumental variable. In German 'von John', Swedish 'av John' and Danish 'af John' point at the Ground, that is, from the side of the text producer John is the reason for the love. If, for example in Swedish one wants to mark the instrumental angle one has to use 'genom' ('through').

Reader:
You mean 'Mary is loved through John'? Sounds very odd.
Author:
But it makes clear what the unknown agent means. You have to imagine a real situation. Examples, which you construct for a certain presentation, are all in the air. I will take an example from the reality of the world of science. Consider this short text as a description of an empirical relationship in the so-called Visual Cliff experiment:
The infant was lured by its mother to cross the glass.

In this situation in fact the mother took part as a factor in the experiment. Her task was to wave a toy at the opposite side of the "cliff", so that the infant would have to chose to reject the cliff to be able to come to her or realise that it could not cross over.
Reader:
I know it. It was about depth perception. But how does it relate to the passive clause example?
Author:
The mother in the experiment was instrumental - for the researchers. In fact the researchers' intention to lure the infant to cross over the glass top was put into operation 'through' the mother's function. This example instructs us to set the outer parenthesis, that is, distinguishing the observer from the phenomenon, which we discussed in the first chapter. The perspective shift from 'by' to 'through' signals this parenthesis more clearly. What keeps us from regarding John as instrument of some outer force in a certain specific reality, which we do not know but may imagine? Setting the parenthesis is a matter of depth perception. Perspective Text Analysis in a nutshell.
Reader:
I have got that. The way you have planned it, I guess others will get it too. I suggest you keep the manuscript intact, with the additions and adjustments we have made to it. But some other time I would like to see how the system works in the computer.
Author:
Then you have to learn PERTEX, but that is another story.

4. Literature

The references listed in this chapter are for the most part research articles published in the journal Kognitionsvetenskaplig forskning (Cognitive Science Research) (ISSN 0281-9864). The journal is covered by ERIC and PsycInfo in the USA and also ZPID at the university of Trier, Germany. Other ways of documenting the method development have been internationally edited handbooks, and international symposia. The method has been presented in several countries, Denmark, Norway, Germany, The Netherlands, Belgium, Austria, Italy, and Spain.

The references form four sections: (1) Theory, (2) Method and systems development, (3) Applications (with a certain reservation for publications I am unaware of) and (4) Integration and synthesis. They are given in chronological order within each section.

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